

I. AMENDMENTS TO THE CLAIMS:

The listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

- 1-5. (Cancelled)
6. (Currently Amended) A switched reluctance machine, comprising:
a rotor defining a plurality of salient rotor poles substantially equally spaced about the rotor, each rotor pole having a pole face construction and defining an angular width, wherein the angular width of the rotor pole with the widest width is:
(a) substantially equal to or greater than the angular width of the rotor pole with the narrowest width, and
(b) less than 1.5 times the angular width of the rotor pole with the narrowest width;
a stator defining at least one radially opposed pair of salient stator poles having substantially the same pole face construction as one another; and
a phase winding for energizing the at least one pair of stator poles over a plurality of discrete intervals, the energizing of the phase winding producing a given desired output on the rotor and producing a normal force tending to cause movement of the energized stator poles towards the rotor;
wherein a first profile of the normal forces experienced by the at least one pair of stator poles over a first discrete interval is different from a subsequent profile of the normal forces experienced by the at least one pair of stator poles over a subsequent discrete interval.

7. (Previously Presented) The switched reluctance machine of claim 6, wherein:
 - a) over the first discrete interval, a first radially opposed pair of salient rotor poles is brought towards alignment with the at least one pair of stator poles, each rotor pole of the first pair having a first pole face construction and a first angular width substantially similar to the other pole of the pair;
 - b) over the subsequent discrete interval, a second radially opposed pair of salient rotor poles is brought towards alignment with the at least one pair of stator poles, each rotor pole of the second pair having a second pole face construction and second angular width substantially similar to the other pole of the pair; and
 - c) the first pole face construction of the rotor poles forming the first radially opposed pair is different from the second pole face construction of the rotor poles forming the second radially opposed pair.
8. (Previously Presented) The switched reluctance machine of claim 7, wherein the first angular width of the rotor poles forming the first radially opposed pair is substantially the same as the second angular width of the rotor poles forming the second radially opposed pair.
9. (Previously Presented) The switched reluctance machine of claim 7, wherein a first maximum air gap established between the first pair and the at least one pair of stator poles is different from a second maximum air gap established between the second pair of rotor poles and the at least one pair of stator poles.
10. (Previously Presented) The switched reluctance machine of claim 7, wherein each of the rotor poles of the first pair having the first pole face construction defines a notched pole face.
- 11-13. (Cancelled)

14. (Currently Amended) An switched reluctance machine comprising:
- a rotor defining a plurality of salient rotor poles substantially equally spaced about the rotor, each rotor pole having a pole face construction and an angular width, wherein the angular widths of each of the rotor poles are substantially the same;
- a stator a plurality of salient stator poles substantially equally spaced about the stator, the plurality of salient stator poles forming:
- a first radially opposed pair of salient stator poles, each stator pole of the first pair having a first pole face construction substantially similar to the other pole of the pair, and
- a second radially opposed pair of salient stator poles, each stator pole of the second pair having a second pole face construction substantially similar to the other pole of the pair; and
- at least one current carrying member for simultaneously energizing the first and second pairs of stator poles over a plurality of discrete intervals[[;]], the energizing of the current carrying member producing a given desired output on the rotor and producing normal forces tending to cause movement of the energized stator poles towards the rotor;
- wherein a first profile of the normal forces experienced by the first pair of stator poles over one of the discrete intervals is substantially different from a second profile of the normal forces experienced by the second pair of stator poles over the same discrete interval.

15. (Previously Presented) The switched reluctance machine of claim 14, wherein the first pole face construction of the stator poles forming the first radially opposed pair is different from the second pole face construction of the stator poles forming the second radially opposed pair.
16. (Previously Presented) The switched reluctance machine of claim 15, wherein each of the stator poles of the first radially opposed pair having the first pole face construction defines a notched pole face.
17. (Previously Presented) The switched reluctance machine of claim 16, wherein the pole face construction of each of the rotor poles is substantially the same.

18. (Previously Presented) A switched reluctance machine, comprising:
- a rotor defining a plurality of salient rotor poles, the plurality of salient rotor poles substantially equally spaced about the rotor and having substantially the same angular width, the plurality of salient rotor poles forming:
 - a first radially opposed pairs of salient rotor poles, each rotor pole of the first pair having a first pole face construction substantially similar to the other pole of the pair, and
 - a second radially opposed pairs of salient rotor poles, each rotor pole of the second pair having a second pole face construction substantially similar to the other pole of the pair, the second pole face construction being different from the first pole face construction;
 - a stator defining a plurality of salient stator poles substantially equally spaced about the stator and having substantially the same pole face construction, the plurality of salient stator poles forming first and second radially opposed pairs of salient stator poles; and
- at least one current carrying member for simultaneously energizing the first and second radially opposed pairs of salient stator poles over a plurality of discrete intervals, the energizing of the at least one current carrying member producing a given desired output on the rotor and producing normal forces tending to cause movement of the energized stator poles towards the rotor,
- wherein the first pair of rotor poles having the first pole face construction is brought towards alignment with the first pair of stator poles over one discrete interval;
- wherein the second pair of rotor poles having the second pole face construction is brought towards alignment with the second pair of stator poles over the same discrete interval; and
- wherein a first profile of the normal forces experienced by the first pair of stator poles over the one discrete interval is substantially different from a second profile of the normal forces experienced by the second pair of stator poles over the same discrete interval.

19. (Cancelled)

20. (Previously Presented) The switched reluctance machine of claim 6, wherein each of the stator poles forming the at least one pair defines a notched pole face.